

JOURNAL OF THE WASHINGTON ACADEMY OF SCIENCES

VOLUME 39

JANUARY 15, 1949

No. 1

NATURAL HISTORY.—*The codfishes of the Greeks and Romans.** ALFRED C. ANDREWS, University of Miami. (Communicated by LEONARD P. SCHULTZ.)

The codfish family, comprising the gadoids, is a large and important one. In it belong such fishes as the cod, the hake, the haddock, the whiting, the eglefin, the poutasou, the ling, the burbot, the dorse, the coalfish, the pollack, and the bib or pout. Some of these fishes do not occur in the Mediterranean today and therefore presumably were not familiar to the Greeks and Romans. But some are very common in that sea and must have been of considerable economic importance in ancient times.

But a scholar, whether he is an ichthyologist or a classical philologist, will look in vain for a comprehensive discussion of this family. He will find some data in notes on the names of gadoids occurring in certain works of ancient authors, some in etymological articles and reference works, and some in books that deal with classical zoology. There is a short article by Marx in an early volume of Pauly-Wissowa-Kroll-Mittelhaus on the asellus¹ and an equally brief one by Steier in a later volume of the same encyclopedia on the mustela.² The former is much out of date, and the two taken together deal with only a portion of the names applied to gadoids. The most valuable of recent reference works concerned with identifications is Sir D'Arcy W. Thompson's *A glossary of Greek fishes*,³ frequently cited in this article. Its chief drawback is that the alphabetical organization of the material creates a research problem of no mean scope for a scholar

who desires information about a particular family or genus of fishes, since the index is incomplete.

As matters now stand, a scholar seeking information regarding codfishes in ancient times is faced with two serious difficulties. The first is that unless he knows before he begins what names were applied or may have been applied to members of this group, he will make little progress. The second is that the meanings assigned to these names are often vague and in some cases actually erroneous.

The present article represents, so far as can be ascertained, the first attempt to treat this family of fishes as a unit, with discussion of every Greek and Latin name that was or may have been applied to gadoids. This treatment not only makes the relevant information available in convenient and readily accessible form but also it yields more precise meanings for the names themselves. This results from study of these names in relation to one another rather than as isolated terms. Consequently, the identifications of Greek fish names in particular will be found to differ frequently from those of Thompson and from those given in the *Greek-English lexicon* of Liddell-Scott-Jones.

1. MUSTELA

The mustela or "weaselfish" of the Romans has generally been identified as the cod, more particularly the 5-bearded rockling, *Gadus (Mottella) mustela* Linnaeus, although the modern nomenclature suggests that ancient usage was not confined to this species.

The Mediterranean hake, *Phycis mediterraneus*

* Received August 26, 1948.

¹ *Real-Encyclopädie der classischen Altertumswissenschaft* 2: 1532-1533. 1896.

² *Idem*, 16: 907-908. 1933.

³ London, Oxford University Press, 1947.

De la Roche, is known today as musdea at Pola and as musdea and musdeca at Rome⁴; and such names have earlier been reported as moustelo at Marseille (Marion), moustella bruna at Nice (Risso), mustella de scheuggio at Genoa (Sassi), musdea at Naples (Costa), and musdea di funnu in Sicily (Döderlein).⁵

The fork-beard hake, *Phycis blennioides* Bloch and Schneider, is also called musdea and musdeca at Rome,⁶ and such earlier names have been reported as moustelo blane and moustelo de roco in the Provence (Réguis), moustèle at Marseille (Brünnich), moustella blanca at Nice (Risso), mustella at Genoa (Sassi), mustià at Cagliari (Targioni), and mustea and mustià at Palermo (Döderlein).⁷

The 3-bearded rockling, *Motella tricirrata* Nilsson, is also known as musdea and musdeca at Rome, musdea at Catanzaro, and mostella at Livorno.⁸ Scholars have previously reported such names as mostel at Mallorca (Barcelo), moustelo in the Provence (Réguis), moustelo at Marseille (Marion), moustella at Nice (Risso), mostella at Genoa (Targioni), musdea de funnala at Naples (A. Costa), and mustedda and mustiddu in Sicily (Rafinesque).⁹

For *Motella maculata* Günther such names have been reported as moustello at Nice (Risso) and moustelo in the Provence (Réguis).¹⁰

For *Motella fusca* Bonaparte such names have been reported as mostel at Mallorca (Barcelo), moustela at Nice (Risso), musdea de scoglio for the male and musdea de fangu for the female at Naples, as well as musdea de funnu (Costa).¹¹

And for *Uraleptus maraldi* Costa such names have been reported as moustella negra (Risso) and moustelo negro (Réguis) at Nice.¹²

In addition, it may be noted that Larousse defines French moustèle as a generic term for *Motella* sp.

The modern names that come from mustela obviously do not apply to a single species but to several closely related ones, more especially *Phycis* sp. and *Motella* sp. This does not, how-

ever, justify an immediate conclusion that mustela in the classical era had a similarly diverse application. The history of fish names reflects a tendency for an originally limited application to spread to other closely related and similar fishes. The modern nomenclature does, however, exhibit two noteworthy features. The first is that there have been only sporadic survivals of mustela, found almost exclusively along the shores of the Tyrrhenian and Ligurian Seas, more especially at Marseille, Nice, Genoa, Rome, Naples, and Palermo. This suggests that in the classical period the use of mustela in the speech of the common people was probably largely confined to that area. The second is that these survivals do not predominate for any one species but are applied in approximately equal degree to various species of *Phycis* and *Motella*. Generally, when a name which was once narrowly restricted in application spread to other species, the survivals in modern nomenclature contain a clue to the original application. Those which are applied to other than the original species tend to be less numerous and also to be qualified in some way. Neither tendency is clearly manifest in this instance, and this gives some basis for believing that Latin mustela similarly did not refer specifically to *Gadus (Motella) mustela*, but to several closely related species, more especially *Phycis* sp. and *Motella* sp.

The mustela discussed above is the one which Ennius¹³ considered superior to all other fishes when caught at Clupea and Pliny¹⁴ ranked second only to the scarus (the parrotfish, *Scarus cretensis* Cuvier and Valenciennes) in his time, although it was esteemed chiefly for its liver. But when Pliny says that *mirum dictu* there was a mustela in the Lake of Constance which in excellence of taste compared favorably with the marine mustela, he is referring to the burbot or eelpout, *Lota vulgaris* Cuvier, which even today attains unusual excellence in the same lake. Finds at Robenhausen testify to use of this fish for food as early as the prehistoric period.¹⁵ It has long been

⁴ Cf. *La pesca nei mari e nelle acque interne d'Italia*, Ministero dell' Agricoltura e delle Foreste, Roma, Istituto Poligrafico dello Stato, 3: 80, 84. 1931.

⁵ Cf. Julius V. Carus, *Prodromus faunae mediterraneae* 2: 575-576. Stuttgart, 1885-93.

⁶ Cf. *La pesca nei mari* 3: 80.

⁷ Cf. Carus, *op. cit.*, 2: 575.

⁸ Cf. *La pesca nei mari* 3: 83, 51, 62.

⁹ Cf. Carus, *op. cit.*, 2: 577.

¹⁰ *Ibid.*: 578.

¹¹ *Ibid.*

¹² *Ibid.*: 574.

¹³ *Heduph.* 1 (apud Apul. *Apol.* 39). Thompson (*op. cit.*: 169) thinks that this may be the lampry. His identification seems to depend in part upon taking Clupea to be a fish name rather than a place name. E. H. Warmington (*Remains of Old Latin*, Loeb Classical Library, 1: 409, note a) similarly would read *clupeis* for *Clupea* and take it as the tiny fresh-water fish described by Pliny (*N.H.* 9.44).

¹⁴ *N.H.* 9.63.

¹⁵ Cf. L. Rüttimeyer, "Die Fauna der Pfahlbauten in der Schweiz," *Neue Denkschr. allg. Schweiz. Ges. Naturw.*, 19: 114. 1862.

esteemed as a great delicacy, but more on the continent than in England. The flesh is white and delicate, the liver being the most delicious morsel.¹⁶ This species also occurs in lakes of northern Italy, where it is known by such names as bottatrice (dial. bottris, boza) at Milan, bottratrice at Brescia, and bottatrice (dial. bosa trisa) at Verona.¹⁷ Bottatrice is apparently a compound of botta with trische (trüsche), the second element being the more common name of this species in German Switzerland.¹⁸ The first appearance of *lotta as a name for the burbot is in the tenth century. This is evidently a Gallic word, the source of French lotte and Spanish and Portuguese lota.¹⁹ Ausonius²⁰ describes the mustela and speaks of it as occurring in the Donau and the Moselle rather than in the Lake of Constance. His mustela may also be the burbot,²¹ although it has been identified by some as the lampern or lamper-eel, *Petromyzon fluviatilis* Linnaeus,²² which is regarded by many epicures as a real delicacy. Neither identification is wholly satisfactory.²³ Columella's allusion to the voracity of the *mustela*²⁴ also suggests the burbot, which is a notorious fish of prey, although Thompson²⁵ thinks that it may be the lamprey. The burbot is a close relative of the cod and hake, classified by Linnaeus as a *Gadus*, and the tendency of the Romans to refer to it by the same name is therefore understandable.

2. Γαλή

Greek γαλή, like Latin *mustela*, means "weaselfish." Aristotle²⁶ speaks of a γαλέος with many pyloric caeca, which led Schneider to emend to γαλή,²⁷ a change approved by Hoff-

man.²⁸ This emendation was motivated by the fact that γαλέος was the usual term for a dogfish, which has no pyloric appendages, whereas the Gadidae do. That a copyist's error of this sort should have occurred is comprehensible, since γαλέος was a more common fish name than γαλή. It is noteworthy, moreover, that Suidas confused γαλή with γαλέος and that some early scholars of the modern period made the mistake of identifying the γαλή as a type of dogfish.

The first certain occurrence of γαλή is a bare mention by Epänetus,²⁹ who was active about 100 B.C. Aelian,³⁰ who clearly distinguishes the γαλή from the γαλέος, says that the γαλή is much like the ἥπατος,³¹ for it is a small fish with dull eyes, the pupils approximately dark blue. Its barbel is larger than that of the ἥπατος, he says, and smaller than that of the χρέμης; it feeds on seaweed and is a rockfish, and like the land γαλή (the weasel) allegedly eats the eyes of corpses it encounters. He gives Epirus as its habitat. There is no other ascertainable occurrence of the word as a fish name in the classical period. It is noteworthy that except for the single conjectural occurrence of the word in Aristotle it is not met in the literature until about 100 B.C. This circumstance suggests that it is possible that γαλή is a mere translation of *mustela*, which was in use at least as early as the second century B.C. and was a much more common name.

Aelian's account points to the burbot, *Lota vulgaris* Cuvier, although H. Gossen³² maintains that it is an accurate description of the 3-bearded rockling, *Motella tricirrata* Nilsson, which is said to be good eating, although it is now little used

²⁸ Cf. H. A. Hoffman and D. S. Jordan, "A Catalogue of the Fishes of Greece," Proc. Acad. Nat. Sci. Philadelphia 1892: 234.

²⁹ Apud Athen. 7.328.f.

³⁰ Nat. an. 15.11; cf. Plin. N.H. 32.53.

³¹ Despite Steier, Aelian does not give ἥπατος as a synonym of γαλή but merely says that the γαλή resembles the ἥπατος. Steier is incorrect in his interpretation of Aelian's passage and overly hasty in accepting the inference of Alfred Papendick (*Die Fischnamen im griechisch-lateinischen Glossaren*: 34. Königsberg, 1926) from the equation of *mustela* with ἥπατος in *CGL* 3: 89, 16 that γαλή, *mustela*, and ἥπατος are all equivalent. On the other hand, the synonymy of *mustela* and γαλή is attested by many lemmas in *CGL*, viz., 2: 131, 59; 261, 16; 3: 18, 57; 90, 69; 189, 43; 256, 65; 259, 35; 361, 70; 471, 17, as well as the form γαλέα, viz., 3: 132, 50; 187, 16; 320, 39; 431, 46; 495, 57; 512, 61.

³² "Die Tiernamen in Alians 17 Büchern περι ζώων," Quellen und Studien Geschichte Naturw. und Medizin 4 (3) (hereafter cited as "Aelian"), par. 140. 1935; "Zoologisches bei Athenaios," *idem* 7 (2/3) (hereafter cited as "Athen."): 262. 1939.

¹⁶ Cf. Francis Day, *The fishes of Great Britain and Ireland* 1: 308. 1880-84. Note *Hor. Sat.* 2.8.29.

¹⁷ Cf. *La pesca nei mari* 3: 70, 39, 103.

¹⁸ Cf. Paul Barbier, "Noms de poissons, notes étymologiques et lexicographiques," Rev. Langues Romanes 56: 181. 1913.

¹⁹ Cf. W. Meyer-Lübke, *Romanisches etymologisches Wörterbuch*, cd. 3: 416. (Heidelberg, 1935.)
²⁰ *Mos.* 106 ff.

²¹ It has been so identified by L. Tross, E. Böcking, and Schäfer.

²² E.g., Gesner, Salviani, Paulus Jovius, and Francis Day.

²³ Thompson (*op. cit.*: 169) feels sure that Ausonius' account applies to the sturgeon.

²⁴ 8.17.8: *avidae mustelae*.

²⁵ *Op. cit.*: 168.

²⁶ *Hist. an.* 508 b 17.

²⁷ Cf. D'Arcy W. Thompson, *The Works of Aristotle translated into English 4: Historia animalium* (Oxford, 1910), note on *loc. cit.*

except by the poor, since its odor a few hours after death becomes distinctly unpleasant.³³ This weakens the identification of Gossen, who incidentally fails to explain the presence of a marine species in Epirus. It is noteworthy that γάλια is the regular Modern Greek name for the burbot³⁴ and that this species has been known as galea in Liguria and at the northern end of the Adriatic,³⁵ a name which goes back to a Greek form γαλέη.³⁶ It should be remarked, however, that the lamprey is called γαλεή and γαλειᾶ in Modern Greek.³⁷

Hesychius of Alexandria gives γάλιοι as a synonym of γάδος, and Hesychius and the Lexicon of Cyrillus give γάλα as a synonym of γάδος. On the first equation Schweighäuser³⁸ comments that perhaps γάλιοι is a corruption of γαλία, and on the second he remarks that possibly γάλα is for γαλαῖ, which would be a contraction of γαλεία. Gossen³⁹ emends the γάλα of Hesychius' second equation to γαλαρίας, identifying the fish as the poor-cod, *Gadus minutus* Linnaeus. This is of no value as a food fish,⁴⁰ although it is fairly common in the Mediterranean.⁴¹ If the names which appear in Hesychius and the Lexicon of Cyrillus are actually corruptions of γαλή or variants of that name, γαλή must have been used, at least in the late period, as a synonym of γάδος, which is discussed later in this article.

Hesychius also defines γαλίαι as ὀνίσκοι, similarly identified by Gossen⁴² as the poor-cod. The ὀνίσκος is discussed below.

Since the earliest certain occurrence of γαλή is comparatively late, since the term is found only in two technical writers of the classical period, if we exclude Aristotle, and since it survives to only a limited extent in the modern nomenclature, it is a logical inference that the term was probably not in popular use, but was merely a translation of *mustela*, as has already been suggested. We

have already seen that in Aelian its use as a term for the burbot parallels one common application of *mustela*, but the application of *mustela* to the burbot almost certainly represents an extension from its marine relatives. It is therefore perhaps not pressing the meagre evidence too hard to assume that in Greek technical writers γαλή was used as a term for *Phycis* sp. and *Motella* sp.

3. ἤπατος

It was pointed out above that Aelian says that the ἤπατος is very similar to the γαλή, which he describes as a small fish with dull eyes, the pupils approximately dark blue, with a barbel larger than that of the ἤπατος. Elsewhere⁴³ he describes the ἤπατος as a large, but sluggish, fish that lurks in hiding places of the sea. Aristotle describes the ἤπατος as a fish with few caeca,⁴⁴ solitary, carnivorous, with serrate teeth, black in color, with large eyes and a triangular, white heart.⁴⁵ Speusippus⁴⁶ says that it resembles the φάγρος (the braize, *Pagrus vulgaris* Cuvier and Valenciennes) and the ἐρυθρίνος (possibly the Mediterranean barbier, *Serranus anthias* Cuvier and Valenciennes). Eubulus⁴⁷ says that it has no gall. Diocles⁴⁸ refers to it as a rock-fish. Hegesander⁴⁹ states that it has two stones in its head, similar in luster and color to those found in oysters, but rhomboid in shape. Such ear stones might be found in any bony fish, but not in the shark family. Phylotimus⁵⁰ classifies the ἤπατος as a fish with soft flesh. Galen⁵¹ says that it has flesh of intermediate consistency, despite Phylotimus. Oribasius⁵² also calls it a fish with flesh of intermediate consistency, and Xenocrates says that the flesh is moderately delicate and of relatively loose texture,⁵³ and should not be eaten in the fall, for then it is of bad juice.⁵⁴ Marcus Sidonius⁵⁵ speaks of it as

⁴³ *Nat. an.* 9.38. Thompson (*op. cit.*: 76) regards this as a different fish from the usual ἤπατος.

⁴⁴ *Hist. an.* 508 b 19.

⁴⁵ Page 306 Rose (apud Athen. 7.301.c).

⁴⁶ Apud Athen. 7.300.e.

⁴⁷ *Ibid.* 3.108.a (in Koek, *Comicorum Atticorum fragmenta* 2: 185).

⁴⁸ *Ibid.* 7.301.c (p. 173, Wellmann).

⁴⁹ *Ibid.* 3.108.a (in Müller, *Fragmenta historicorum graecorum* 4: 420).

⁵⁰ Apud Galen. *Alim. fac.* 3.29 (p. 368.1 Helmsreich).

⁵¹ *Alim. fac.* 3.29 (p. 370.15 Helmsreich).

⁵² *Coll. med.* 3.15.7.

⁵³ *Alim. aquat.* 10 (exc. Oribas. *Coll. med.* 2.58.-27).

⁵⁴ *Ibid.* 3.

⁵⁵ 10.

³³ Cf. Day, *op. cit.* (see note 16), 1: 317.

³⁴ Cf. Thompson's note on Aristot. *Hist. an.* 508 b 17 and Hoffman-Jordan, *loc. cit.* (see note 28).

³⁵ Cf. P. Rolla, *Ittiologia popolare*: 21. Casale, 1906.

³⁶ Cf. Gerhard Rohlf's, *Etymologisches Wörterbuch der unteritalienischen Gräzität*, no. 407. Halle, 1930.

³⁷ Cf. Thompson, *Glossary*: 16S.

³⁸ Note on Athen. 7.315.f.

³⁹ "Die zoologischen Glossen im Lexikon des Hesych." Quellen und Studien Gesch. Naturw. und Medizin 7 (1) (hereafter cited as "Hesych."): nos. 338 and 341. 1937.

⁴⁰ Cf. Day, *op. cit.* (see note 16) 1: 288.

⁴¹ Cf. Carus, *op. cit.* (see note 5) 2: 571.

⁴² "Hesych." (see note 39), no. 345.

crooked-toothed. It is apparently this fish which Pliny⁵⁶ calls hepar.

J. P. J. M. Brands⁵⁷ explains this name as a derivative of ἥπαρ, "liver," meaning literally "liverish," which seems correct, and says that the fish is unidentifiable. F. A. Wood⁵⁸ conjectured that the fish was so named because it was liver-colored. Reinhold Strömberg⁵⁹ accepts this as one possibility, calling attention (as does Wood) to ἥπατιζειν, "to be liver-colored," and ἥπατις, "liver-colored," but also points out that it may have been so named because it had a large liver. He suggests that the statement of Eubulus that the fish had no gall may represent only an inference from the name. But D'Arcy W. Thompson⁶⁰ suspects that the source of ἥπατος is Egyptian abtu, a word for a fish occurring in the Book of the Dead. He considers the fish unidentifiable, stating that it was supposed by Belon and by Cuvier, on no valid grounds, to be the haddock or some similar gadoid fish. More specifically, Cuvier⁶¹ identified the ἥπατος as the eglefin, *Gadus aeglefinus* Linnaeus, which does not occur in the Mediterranean.⁶² Gossen⁶³ on the basis of Aristotle's description identifies the fish as *Molva elongata* Risso, a type of ling belonging to the gadoid family and found in the Mediterranean.

4. Λεβίας

Aristotle's description of the ἥπατος⁶⁴ is quoted by Athenaeus,⁶⁵ who gives λεβίας as a synonym of ἥπατος and cites Diocles as classifying the λεβίας as a rockfish and Speusippus as comparing it to the φάγρος (the braize). Hesychius defines λεβίας as a type of preserved fish with the scales left on, also used as a term for a type of lake fish. Aristophanes⁶⁶ lists the λεβίας along with the σκόμβρος (the common mackerel, *Scomber scomber* Linnaeus), the κολίας

(the coly mackerel, *Scomber colias* Gmelin), the σαπέροδη (a type of scienid), the μύλλος (a type of scienid), and the θύννις (the common tunny, *Thynnus vulgaris* Cuvier and Valenciennes). Pollux⁶⁷ lists the same six fishes. Diphilus⁶⁸ compares the λεβίας to the σίλουρος (probably here the sheatfish, *Silurus glanis* Linnaeus) and says that both were popular among the Rhodians. Archestratus⁶⁹ speaks of buying both the λεβίας and the ἥπατος at Delos and Tenos.

Gossen⁷⁰ regards λεβίας as a mere synonym of ἥπατος and similarly identifies it as *Molva elongata*. Thompson⁷¹ identifies the λεβίας as *Labeo niloticus* Cuvier. This may be correct in so far as the name refers to a Nile fish, but as a term for a marine fish of the Mediterranean it must have denoted a different species. In the latter sense it was identical with or very similar to the ἥπατος, and both were very much like the γαλῆ, which is almost certainly a gadoid. It is very probable, therefore, that both of these names were used as terms for one or more of the gadoids, although there is no ascertainable survival of either name in the modern nomenclature.

5. Δελκανός

Euthydemus⁷² says that a fish known as the δελκανός was named after the river Delcos, where it was caught, and was very wholesome pickled in brine. Hesychius defines Delcos as a marsh in Thrace that was rich in fish. Dorion⁷³ says that this δελκανός was identified by some with the λεβίας. Hesychius defines λεβίας as sometimes meaning a lake fish.

Gossen⁷⁴ identifies this fresh-water δελκανός as *Barbus plebeius* Valenciennes, a small barbel which occurs in both the Italian and the Balkan lakes and rivers. It has already been pointed out that mustela certainly and γαλῆ probably were applied not only to certain marine gadoids, but also the the fresh-water burbot, *Lota vulgaris* Cuvier. It seems very likely that both the δελκανός and the lake λεβίας were also the burbot.

⁶⁷ 6.48.

⁶⁸ Apud Athen. 4.132.d (in Kock, *op. cit.* 2: 545).

⁶⁹ *Ib.* 7.301.d (frg. 30 Ribbeck; frg. 27 Brandt).

⁷⁰ "Athen." (see note 32): 261.

⁷¹ *Op. cit.*: 9, 146; cf. "On Egyptian Fish Names Used by Greek Writers," *Journ. Egyptian Archaeol.* 14: 23-24, 1928.

⁷² Apud Athen. 3.118.b.

⁷³ *Ibid.*

⁷⁴ "Hesych." (see note 39), nos. 427 and 1259; "Athen." (see note 32): 240.

⁵⁶ *N.H.* 32.149.

⁵⁷ *Grieksche Diernamen*: 156. Purmerend, 1935.

⁵⁸ "Greek Fish Names," *Amer. Journ. Philol.* 49: 49, 1928.

⁵⁹ "Studien zur Etymologie und Bildung der griechischen Fischnamen," *Göteborgs Högskolas Årsskr.* 49: 45, 1943.

⁶⁰ *Op. cit.*: 76.

⁶¹ Cuvier et Valenciennes, *Histoire naturelle des poissons* 2: 232. Paris, 1828-49.

⁶² Cf. Day, *op. cit.* (see note 16) 1: 283.

⁶³ "Aelian" (see note 32), par. 140; "Athen." (see note 32): 261.

⁶⁴ Page 306 Rose.

⁶⁵ 7.301.c.

⁶⁶ Apud Athen. 3.118.c (in Kock, *Comicorum Atticorum fragmenta* 1: 499).

6. Πρέπων

Oppian⁷⁵ speaks briefly of the πρέπων as a fish which lurks in lairs in the depths of the sea and, being large and powerful in body, but somewhat sluggish in movement, lies in wait for smaller fish. Aelian⁷⁶ describes the fish in almost identical terms. Suidas says that πρέπων and πρόβατον were alternative terms for a very large fish known as ὕπατος. The fish is also mentioned by Marcus Sidonius.⁷⁷ The description of the fish, the fact that Suidas identifies it with the ὕπατος (properly ἤπατος²), and the fact that Aelian describes the ἤπατος in almost identical language in the same passage suggest that this is one of the Gadidae.⁷⁸

7. Πρόβατον

The πρόβατον, or "sheepfish," is described in precisely the same terms as the πρέπων by both Oppian⁷⁹ and Aelian,⁸⁰ except that the former⁸¹ also says that when hooked it often escaped by merely becoming a dead weight on the line, sinking to the bottom. Although Suidas regarded πρέπων and πρόβατον as synonymous, both Oppian and Aelian clearly considered them different fish. Rondelet reported that the umbra (one of the scienids) was called "sea-sheep" by the Greeks in his day. Belon thought that the fish might be *Merlangus poutassou*. Mair⁸² identifies it merely as one of the Gadidae. Gossen⁸³ calls it specifically *Merluccius vulgaris* Fleming. Thompson⁸⁴ regards it as unidentified.

8. Ὄνος

Ancient sources yield much more information regarding the ὄνος or "ass-fish." Aristotle⁸⁵ says that some fishes hide in the sand and some in

the mud, but the majority hide only during the winter, crustaceans, rockfishes, rays, and cartilaginous fishes hiding only during extremely severe weather, as is evident from the fact that they are not caught when the weather is extremely cold. But some fishes hide in summer, for example, the γλαῦκος (unidentified), which hides in summer for about 60 days. The ὄνος and the χρύσοφρυς (the gilt-head, *Chrysophrys aurata* Cuvier and Valenciennes) also hide in summer, and that the ὄνος hides for a long period may be inferred from the fact that there is a long period when it is not caught. Oppian⁸⁶ also comments on the fact that the ὄνος stays in hiding during the heat of summer. Aristotle also says⁸⁷ that the ὄνος, the βάτος (the skate, *Raja* sp.), the ψῆγτα (the plaice, *Pleuronectes* sp.), and the δίνη (the angel-shark, *Rhina squatina* Rafinesque) burrow in the sand, and after concealing themselves angle with the filaments that they have in their mouths, which fishermen call their fishing rods. In Pliny's rendering of this passage⁸⁸ there is no reference to the ὄνος. Athenaeus⁸⁹ quotes Aristotle as saying that the ὄνος, like sharks and dogfishes (γαλεοί), has a widely gaping mouth and is not gregarious. It is the only fish that has its heart in its stomach,⁹⁰ and in its brain it has stones resembling millstones. It is also the only fish that lives in holes during the hottest dogdays, all the others going into hiding during the severest winter weather. Aristotle⁹¹ in a dubious passage says that it angles like the βάρραχος (the fishing frog, *Lophius piscatorius* Linnaeus). Epicharmus⁹² refers to the stomach of the ὄνος as extraordinary.⁹³ Aelian⁹⁴ also says that the ὄνος is not gregarious and is the only fish that has its heart in its stomach and has stones in its head resembling millstones, being also the only fish to go into hiding in the dogdays, all the others hiding only in the severest winter weather. Oppian speaks

⁷⁵ *Hal.* 1.146 ff.

⁷⁶ *Nat. an.* 9.38.

⁷⁷ *S.*

⁷⁸ Cf. Mair, note on Oppian. *loc. cit.* Gossen ("Aelian" [see note 32], par. 140) says that it is probably the coalfish, *Gadus virens* Linnaeus, which is rare in the Mediterranean. Thompson (*op. cit.*, p. 218) states only that it is an unknown, large, deep-sea fish. Strömberg (*op. cit.* [see note 59]: 33) regards πρέπων as a present participle of πρέπω, "shine forth," hence "excellent," "that which is suitable (for eating)," and infers from Aelian that the term belonged to the fishermen's patois.

⁷⁹ *Loc. cit.*

⁸⁰ *Loc. cit.*

⁸¹ *Hal.* 3.139 ff.

⁸² *Loc. cit.*

⁸³ *Loc. cit.*

⁸⁴ *Op. cit.*: 220.

⁸⁵ *Hist. an.* 599 b 26 ff.

⁸⁶ *Hal.* 1.151 ff.

⁸⁷ *Hist. an.* 620 b 29 ff.

⁸⁸ *N.H.* 9.144.

⁸⁹ 7.315.e (p. 311 Rose).

⁹⁰ Cf. Aelian. *Nat. an.* 5.20.

⁹¹ *Hist. an.* 620 b 30.

⁹² Apud Athen. 7.315.f (in Kaibel, *Comicorum graecorum fragmenta*: 102).

⁹³ Thompson (*op. cit.*: 183) comments that the "paunch" is not especially large, the saying arising perhaps from the fact that the large swim bladder is apt to force the stomach out of the mouth when hake or cod are pulled up from deep water.

⁹⁴ *Nat. an.* 6.30.

of the *ὄνος* as a very large fish that sinks to the bottom when hooked, instead of fighting, and by sheer weight often breaks the line and gets free,⁹⁵ and gives the deep sea as its habitat.⁹⁶ Phylotimus⁹⁷ lists the *ὄνος* among the soft-fleshed fishes.

This is all the useful information regarding the *ὄνος* obtainable from ancient sources, and most of it clearly stems from Aristotle. The modern nomenclature is not helpful, for *ὄνος* has been largely replaced by names based on *γάδος*. Bussemaker and Cresswell identified the *ὄνος* as the cod, *Gadus mustela* Linnaeus; Cuvier and Littré, as the 3-bearded rockling, *Molella tricirrata* Nilsson; and C. D. Badham⁹⁸ thought that it might be the sea-tench or Mediterranean hake, *Phycis mediterraneus* De la Roche, which he says has a barbel and a large head and is the only gadoid with barbels frequenting southern seas. Camus⁹⁹ identified it as the eglefin, *Gadus aeglefinus* Linnaeus, which does not occur in the Mediterranean.¹⁰⁰ Gossen¹⁰¹ identifies it as the bib or pout, *Gadus luscus* Linnaeus, which is only a wanderer in the Mediterranean, stragglers being taken as far to the east as Italy, but almost never as far as Greece.¹⁰² Brands¹⁰³ goes no farther than to say that it is one of the Gadidae. The *ὄνος* has generally been identified as the common hake, *Merluccius vulgaris* Cuvier,¹⁰⁴ which occurs in the Mediterranean, especially along the northern shores, and in the Adriatic, and has coarse flesh that may be cut into steaks and fried or cooked in pies.¹⁰⁵ If the text of Aristotle is correct, it should be referred rather to the Mediterranean hake, *Phycis mediterraneus* De la Roche, and the fork-beard hake, *Phycis blennioides* Bloch and Schneider,¹⁰⁶

both of which are common in the Mediterranean.¹⁰⁷

9. Ὀνίσκος

With regard to the *ὀνίσκος*, the chief problem is whether or not it is identical with the *ὄνος*, of which this is a diminutive form. Oppian, to judge from the data he gives, considered them different fishes; and Dorion¹⁰⁸ definitely differentiates the two; but Galen¹⁰⁹ says that what Phylotimus called *ὄνος* others called *ὀνίσκος*; and Eustathius¹¹⁰ and Hesychius give *ὀνίσκος* as a synonym of *ὄνος*. The *ὀνίσκος* was certainly closely related to the *ὄνος*, if it was not identical with it. It was a white fish¹¹¹ that lived in the sea,¹¹² feeding in the mud and the shallows.¹¹³ It was not a rockfish, although its flesh was of equal firmness, according to Galen.¹¹⁴ On the other hand, Xenocrates¹¹⁵ speaks of the flesh as of intermediate consistency, and Oribasius¹¹⁶ refers to it as soft, but not particularly friable, and devoid of excrementitious humors. Xenocrates also states¹¹⁷ that the flesh is not acrid, is of good juice, difficult to assimilate, easy to pass, and nourishing. Since it was used as bait for the tunny,¹¹⁸ the *ὀνίσκος* could not have been a very large fish. Oribasius¹¹⁹ mentions a freshwater type. The marine type was considered unsuitable for salting.¹²⁰

Barbier¹²¹ identifies the *ὀνίσκος* with the *ὄνος* and refers to it likewise to the common hake, *Merluccius vulgaris* Cuvier. Bussemaker distinguished it from the *ὄνος* and identified it as the common whiting, *Gadus merlangus* Linnaeus (*Merlangus vulgaris* Fleming). Thompson¹²² believes that the *ὀνίσκος* is probably one of the lesser species of the cod family, perhaps the poutassou, *Merlangus poutassou* Risso, the 3-

⁹⁵ *Hal.* 3.138 ff.

⁹⁶ *Ibid.* 1.151.

⁹⁷ Apud Galen. *Alim. fac.* 3.29 (p. 368.1 Helmreich).

⁹⁸ *Prosc halieutics, or ancient and modern fish tattle:* 353. London, 1854.

⁹⁹ *Histoire des animaux d'Aristote, avec la traduction française* 2: 84. Paris, 1783.

¹⁰⁰ Cf. Day, *op. cit.* (see note 16) 1: 283.

¹⁰¹ "Hesych." (see note 39), nos. 338 and 1557; "Aelian" (see note 32), par. 140; "Athen." (see note 32): 261.

¹⁰² Cf. Day, *op. cit.* (see note 16) 1: 286; Carus, *op. cit.* (see note 5) 2: 572.

¹⁰³ *Op. cit.*: 171.

¹⁰⁴ Cf. Mair's ed. of Oppian, introd.: lxxv; Paul Barbier, "Noms de poissons," *Rev. Langues Romanes* 53: 27. 1910.

¹⁰⁵ Cf. Day, *op. cit.* (see note 16) 1: 300.

¹⁰⁶ Cf. Thompson, note on Aristot. *Hist. an.* 599 b 34; *Glossary:* 182; Mair, *loc. cit.*

¹⁰⁷ Cf. Day, *op. cit.* (see note 16) 1: 303; Carus, *op. cit.* (see note 5) 2: 575.

¹⁰⁸ Apud Athen. 7.315.f.

¹⁰⁹ *Alim. fac.* 3.29 (p. 368.21 Helmreich).

¹¹⁰ Page 862.

¹¹¹ Marc. Sid. 11.

¹¹² Galen. *Alim. fac.* 3.40 (p. 384.18 Helmreich); *De bon. mal. suc.* 3 (p. 397.1 Helmreich).

¹¹³ Oppian. *Hal.* 1.105.

¹¹⁴ *De bon. mal. suc.* 9 (p. 417.24 Helmreich).

¹¹⁵ *Alim. aquat.* 1.

¹¹⁶ *Coll. med.* 3.2.11; 4.1.37.

¹¹⁷ *Alim. aquat.* 14.

¹¹⁸ Oppian. *Hal.* 3.191.

¹¹⁹ *Coll. med.* 3.15.5.

¹²⁰ Galen. *Alim. fac.* 3.40 (p. 384.18 Helmreich); Oribas. *Coll. med.* 4.1.37.

¹²¹ *Loc. cit.* (see note 104).

¹²² *Glossary:* 181-182.

bearded rockling, *Motella tricirrata* Nilsson, or the poor-cod, *Gadus minutus* Linnaeus. The common whiting has been much esteemed as a food fish, more so perhaps than any other species of the genus, being very easy to digest except in April, May, and June, when it is out of condition and may cause nausea and even vomiting. It is best eaten immediately after capture, since it decomposes rapidly. When the takes exceed the demand, whittings are often salted or dried.¹²³ Since the marine *όνισκος* was not suited for salting, it is probably not the common whiting. Another significant point casting doubt on the common whiting is that such physicians as Galen, Xenocrates, and Oribasius would almost certainly have commented on the dangers of eating it out of season. In addition, the common whiting is rare in the Mediterranean,¹²⁴ and it is clear that the *όνισκος* was very common. Gossen regards the equation of *όνος* with *όνισκος* as an outright error¹²⁵ and like Thompson suggests that the *όνισκος* may be the poor-cod.¹²⁶ But this is a very dubious identification, since the poor-cod is practically worthless as a food fish,¹²⁷ and Xenocrates comments favorably on the dietetic qualities of the *όνισκος*. If the *όνισκος* was not identical with the *όνος*, it was certainly very similar to it, and identification of this fish as the common hake is therefore very plausible.

10. Όνίας

Brands¹²⁸ cites *όνίας* as a fish name used by Dorion¹²⁹ and Oppian,¹³⁰ identifying it as one of the Gadidae. Actually, in the cited passages Dorion uses *όνος* and Oppian *όνισκος*, and if Brands had delved a little deeper, he would not so readily have acknowledged himself unable to explain the extension of *όνος*, "ass," to a fish. Nicander of Thyateira¹³¹ says that there are two kinds of *σκάρος*, one of which is the *όνίας* and the other the *αϊολος*. Hesychius also defines *όνίας* as a type of *σκάρος*. The *σκάρος*, as has already been pointed out, is the parrot-fish, *Scarus cretensis* Cuvier and Valenciennes. *Αϊολος* is not a fish name, but a descriptive epithet, probably alluding to the shimmering

gleam of the scales of a freshly caught fish¹³²; and it was applied to varied fishes, such as the *πέρκη* (the sea-perch, *Serranus scriba* Cuvier and Valenciennes),¹³³ the *μόρμυρος* (one of the sea-breans, probably *Pagellus mormyrus* Cuvier and Valenciennes),¹³⁴ the *σάλπη* (the saupe, *Box salpa* Cuvier and Valenciennes),¹³⁵ and the *κορακίνος* (one of the scienids, probably *Corvina nigra* Cuvier and Valenciennes).¹³⁶ Clearly, therefore, *όνίας* was a descriptive epithet, alluding in the case of the *σκάρος* to a dull, ass-gray type; and *όνος* and *όνισκος* were applied to certain gadoids because of their ass-gray coloration.¹³⁷ Identification of the *όνίας* of Nicander as perhaps *Smaris vulgaris* in the *Greek-English lexicon* of Liddell-Scott-Jones assuredly has slight justification.

11. Καλλαρίας

Another Greek fish name which apparently belongs in the gadoid group is notable for the variety of forms in which it occurs. Oppian¹³⁸ uses the form *καλλαρίας* and differentiates this fish from the *όνισκος*, mentioning that it also frequents muddy shallows. Archestratus¹³⁹ identifies the *καλλαρίας* with the *όνος*. Dorion speaks of the *γαλλαρίας* as a type of *όνισκος* with one spiny fin, like the river *μύρανα*,¹⁴⁰

¹³² Cf. Léon Lacroix, "Notes critiques à Athénée, Épithètes et noms de poissons dans un vers de Numenius (Athen. 7.326.a)," *Mélanges Desrousseaux*: 256, note 2. Paris, 1937. Strömberg (*op. cit.* [see note 59]: 23) thinks that the word also alluded to the quick and lively movement of those fishes to which it was applied, but this is not consistent with the actual applications.

¹³³ Epicarm. frg. 47.48 Kaibel (*Comicorum graecorum fragmenta*).

¹³⁴ Oppian. *Hal.* 1.100.

¹³⁵ *Ib.* 1.125.

¹³⁶ Numen. apud Athen. 7.308.e.

¹³⁷ Strömberg (*op. cit.* [see note 59]: 100), accepting the gray coloration as the basic reason for the application of these names, points out that a fish with a large head would be regarded as stupid and obstinate and might therefore be called "assfish."

¹³⁸ *Hal.* 1.105.

¹³⁹ Apud Athen. 7.316.a (frg. 35 Ribbeck, frg. 14 Brandt).

¹⁴⁰ *Ibid.* 7.312.d *Μύρανα* generally denoted the moray, *Muraena helena* Linnaeus, while the European fresh-water eel, *Anguilla vulgaris* Turton, was known as *εγγελος*, and the conger eel, *Conger vulgaris* Cuvier, as *γόγγρος*. There is no fresh-water type of moray, and Dorion's river *μύρανα* must therefore be a different fish. There is, moreover, in the region known to Dorion, no fresh-water fish similar to the moray with one spiny fin, and he was familiar with the use of *εγγελος* as a term for the fresh-water eel. By elimination, accordingly, Dorion may have had in mind the burbot, *Lota vulgaris* Cuvier, or the lamper eel, *Petro-*

¹²³ Cf. Day, *op. cit.* (see note 16) 1: 290.

¹²⁴ Cf. Carus, *op. cit.* (see note 5) 2: 571.

¹²⁵ "Hesych." (see note 39), no. 1557.

¹²⁶ *Loc. cit.* and no. 213.

¹²⁷ Cf. Day, *op. cit.* (see note 16) 1: 288.

¹²⁸ *Op. cit.* (see note 57), p. 171.

¹²⁹ Apud Athen. 7.315.f.

¹³⁰ *Hal.* 3.191.

¹³¹ Apud Athen. 7.320.c.

says that the *γαλλερίας*¹⁴¹ was also called *όνισκος*,¹⁴² and gives both *χελλαρίης* and *όνισκος* as synonyms for *μούλλος* (usually a type of scie-nid).¹⁴³ Euthydemus¹⁴⁴ identifies the *γελα-ρίης*¹⁴⁵ with the *όνισκος* and the *βάκχος*. Hesy-chius identifies the *γαλαρίας* with the *όνισκος*. He also gives *χελιδών* and *χελιδονίας* as syn-onyms of *χελεάρ* and says that *χελεάρ* also denoted a kind of fish.

Strömberg¹⁴⁶ thinks that the form *χελλαρίης* may have arisen through folk etymology by a crossing of *καλλαρίης* with *χελ(λ)ών*, "gray mullet." In the case of forms beginning with *γαλ-* he suspects the influence of the generic term *γαλεός* (shark or dogfish). He suggests that *γαλλερίας* arose from *γαλεός* by the in-fluence of *ἀσπερίας* (perhaps the smooth dog-fish, *Mustelus vulgaris* Müller). Neither explana-tion is especially convincing, for Strömberg starts from the dubious hypothesis that *γαλεός* and *γαλῆ* are really variants of the same word and that therefore people were inclined to asso-ciate sharks and dogfishes with the gadoids. Gossen¹⁴⁷ calls *χελεάρ* a Laconian word which is either equivalent to *χελιδονίας* and in that case possibly denotes *Luvarus imperialis* Ra-finesque,¹⁴⁸ or is equivalent to *χελλαρίας* and

myzon fluviatilis Linnaeus. Of these two, the latter is a somewhat more plausible identification, first because there are some Greek fish names, pre-sumably known to Dorion, which apparently were applied to the burbot, whereas no Greek fish name can with assurance be referred to the lamper eel, and second because there was a marked tendency to confuse the lamper eel with the moray (cf. Thompson, *op. cit.*: 164). Gossen ("Athen.") [see note 32]: 246) says that Dorion's *μύρανα* is certainly the Kurzschwanzaaale (by which he apparently means the suborder Symbranchii) and asserts that the scholarly Dorion is the only one to report that it has only one bone (Gräte). This supposition borders on fantasy. The Symbranchii do not re-semble the moray, but the eel, and they do not occur in streams emptying into the Mediterranean. Moreover, the *ἄκανθα* to which Dorion alludes is almost certainly a prominent fin ray, not a bone. As for the *γαλλαρίας* with one spiny fin, it may be noted that *Motella* sp. has two dorsal fins, the anterior of which is reduced to a narrow, rayed fringe, more or less concealed in the longitudinal groove, and the first ray of this anterior fin is prolonged.

¹⁴¹ Sic Meineke; *γαλλερίδας* AC.

¹⁴² Apud Athen. 7.315.f.

¹⁴³ *Ibid.* 3.118.c.

¹⁴⁴ *Ib.* 7.315.f.

¹⁴⁵ Sic A; *γαλλερίης* C.

¹⁴⁶ *Op. cit.* (see note 59): 130.

¹⁴⁷ "Hesych." (see note 39), no. 2296.

¹⁴⁸ The *χελιδονίας*, or "swallowfish," of the Greeks is probably the flying gurnard, *Dactylopterus volitans* Cuvier and Valenciennes.

in that case is synonymous with *όνισκος* and denotes the poor-cod, *Gadus minutus* Linnaeus. Thompson¹⁴⁹ is also inclined to read *χελλαρίης* for *χελεάρ*, making it synonymous with *όνισκος*. Hesy-chius also gives *γάλα* and *ῥξος* as synonyms of *γάλος*, and Gossen¹⁵⁰ here emends to *γαλαρίας* and *ῥνος*. In still another definition Hesy-chius gives *καλαρίας* as a synonym of *λαζίνης*. Pliny¹⁵¹ classifies the *collyri* (emended by some to *callariae*) as a smaller type of *asellus*. Since he identifies the *bacchus* as a type of *asellus* caught only in deep water and therefore preferred to the *collyrus*, the *collyrus* obviously must have been caught in shallow water. *Collyrus* is cer-tainly a transliteration of some Greek name for one of the gadoids, possibly **κολλυρίας*, a con-jectural variant of the name here discussed.

Since there are almost no descriptive clues, identification in this case must depend almost solely upon the equations made in ancient sources, and these are not entirely in harmony. They do indicate that the name must have denoted a fish very similar to or identical with the *ῥνος* or the *όνισκος*, which would make it a type of cod or hake. As mentioned above, Gossen believes that *χελεάρ* if equivalent to *χελλαρίας* is a synonym of *όνισκος* and denotes the poor-cod, *Gadus minutus* Linnaeus. He also so identifies the *γαλαρίας*.¹⁵² Other scholars have similarly identified this fish name.¹⁵³ But when the name is used as a synonym of *γάδος*, or as a synonym of *λαζίνης*, also called *χαραδρίας*, Gossen refers it to *Gadus luscus* Linnaeus¹⁵⁴. Brands¹⁵⁵ says that the name is not identifiable. Neither *Gadus luscus* nor *Gadus minutus* is a very plausible identification. As has already been pointed out, the latter is practically worthless as a food fish, and the former is only a wanderer in the Medi-terranean, almost never being caught as far to the east as Greece. It is difficult to see how it is possible to restrict the meaning any further than to say that this fish is apparently a type of cod or hake, although Thompson¹⁵⁶ thinks that it is probably the common hake, *Merluccius vulgaris* Cuvier.

¹⁴⁹ *Op. cit.*: 285.

¹⁵⁰ "Hesych." (see note 39), no. 338.

¹⁵¹ *N.H.* 9.61 and 32.146.

¹⁵² "Hesych." (see note 39), no. 341.

¹⁵³ Cf., e.g., Kùlb in August Steier, *Aristoteles und Plinius zur Geschichte der Zoologie*: 82. Würz-burg, 1913.

¹⁵⁴ "Hesych." (see note 39), nos. 338 and 1236.

¹⁵⁵ *Op. cit.* (see note 57): 159.

¹⁵⁶ *Op. cit.*: 97.

12. Λαζίνης

So far as can be ascertained, the only occurrence of λαζίνης as a fish name is in Hesychius, who says that it denoted the χαραδρίας and the fish καλαρίας.¹⁵⁷ As a fish name, λαζίνης probably represents an extension from a type of plover.¹⁵⁸ It may be a gadoid.

13. ὄξος

Likewise, the ὄξος which Hesychius gives as a synonym of γάδος is apparently the only occurrence of this word as a fish name, and Gossen's emendation to ὄνος is therefore plausible, more especially since there is no logical explanation for the application of this word to a fish.

14. GALAXIAS

There is another fish name which bears a close resemblance to καλαρίας and its variants. Phylotimus¹⁵⁹ lists the γαλεώνυμος among fishes with hard flesh. Oribasius¹⁶⁰ says that this fish is of bad juice and difficult to digest. Galen¹⁶¹ says that there is more than a single kind of γαλεός, and that one type, which brought a very high market price among the Romans, was called γαλαξίας¹⁶² by them, but either γαλεός or γαλεώνυμος by the Greeks. He also says that it was a fish with soft flesh, although the other γαλεόι had hard flesh, and that Phylotimus probably fell into error on this point because the fish apparently did not occur in the Greek sea and he was therefore not personally acquainted with it.

Strömberg¹⁶³ says that the form γαλεώνυμος almost certainly arose by a blending of γαλεός and καλιώνυμος (*sic*). The latter, he says, is the name of a fish of prey that was called λύκος and properly means "with a beautiful name," being a typical example of the application of a flattering name to a ferocious fish for the purpose of winning its goodwill. But καλιώνυμος apparently was not the name of a fish of prey, but of the scabbardfish, *Uranoscopus scaber* Lin-

¹⁵⁷ Thompson (*op. cit.*: 144) would read καλαρίας for καλαρίας and χελλαρίας for χαραδρίας. Coray emended λαζίνης to μάζίνης, discussed subsequently in my text.

¹⁵⁸ Cf. Brands, *loc. cit.*

¹⁵⁹ Apud Galen. *Alim. fac.* 3.30.1 (p. 372.5 Helmreich).

¹⁶⁰ *Coll. med.* 3.16.9 and 3.18.9.

¹⁶¹ *Alim. fac.* 3.31 (p. 372.18 Helmreich).

¹⁶² γαλαξίας AB; γαλεξίας V. Note *CGL* 3: 241, 37: δ γαλαξίας galaxias.

¹⁶³ *Op. cit.* (see note 59): 108-109.

naeus, which was ironically called by this name because it was so ugly. Its byname, moreover, was not λύκος, "wolf," but λύχνος, "lamp," possibly applied to it because it was active at night. With regard to γαλαξίας, Strömberg, who takes this to be a Greek term, despite the explicit statement of Galen, suggests that it is perhaps a corrupt derivative of γαλεός, influenced by a word in -αξίας, such as παραξίας. This hypothesis has little to recommend it.

The account of Galen suggests a type of shark or dogfish, but no shark or dogfish is known to have been present in Italian but not in Greek waters. A second possibility is that it may have been a type of sturgeon. On the other hand, it is barely possible that Galen, even though he was personally acquainted with the fish, thought that its Greek name was γαλεός, whereas it was actually γαλῆ, a name which does not occur in his extant works. As has been mentioned before, others lapsed into error on the same point. In that event, the galaxias is probably a gadoid. Furthermore, if galaxias is synonymous with γαλῆ, it is also synonymous with mustela, which would make it a term for *Phycis* sp. and *Motella* sp. Pliny ranked the mustela second only to the parrotfish in his time, and Galen comments on the unusually high market price of the galaxias.

15. Βάκχος

Still another Greek fish name which belongs in this group is βάκχος. Euthydemus¹⁶⁴ makes it synonymous with γελαρίης and ὀνίσκος. Eustathius¹⁶⁵ gives it as a synonym of ὄνος and ὀνίσκος. Xenocrates¹⁶⁶ classifies it as a fish with flesh of intermediate consistency, and Diphilus of Siphnos¹⁶⁷ considered it of good and abundant juice and nourishing. Pliny¹⁶⁸ classifies the bacchus as a type of asellus caught only in the deep sea and therefore preferred to the collyri. The difficulties in this case are aggravated by the fact that βάκχος not only must have denoted a type of gadoid but was used as an alternative term for the μύλλος (usually one of the scienids), like χελλαρίης and ὀνίσκος,¹⁶⁹ and also denoted a type of gray mullet, possibly *Mugil saliens*

¹⁶⁴ Apud Athen. 7.315.f.

¹⁶⁵ Page 862.

¹⁶⁶ *Alim. aquat.* 1.

¹⁶⁷ Apud Athen. 7.356.b.

¹⁶⁸ *N.H.* 9.61 and 32.145.

¹⁶⁹ Cf. Dorion apud Athen. 3.118.c.

Risso.¹⁷⁰ The name clearly was applied to several different fishes, and identification of the gadoid to which it was sometimes applied would be simpler if the common characteristic responsible for the application of this name to such different fishes were known. The most attractive guess is that it was the gray coloration.

Although the *βάκχος* has been identified as the common hake, *Merluccius vulgaris* Cuvier,¹⁷¹ and as the poor-cod, *Gadus minutus* Linnaeus,¹⁷² the evidence is too scant to justify identifying it any more specifically than as a type of cod or hake similar to or identical with the *ὄνος* and the *ὄνισκος*.

16. Μάξιενος

Dorion¹⁷³ gives *μάξιενος*¹⁷⁴ as a synonym of *γαλλερίας* and *ὄνισκος*. Epicharmus¹⁷⁵ refers to *μάξοι* and Hesychius to *μαζίναι*. Xenocrates¹⁷⁶ gives *μαζέας* as a synonym of *ἡπατος*, stating that the flesh is rather delicate and of loose texture, lacking compactness. Theophrastus¹⁷⁷ compares the *μαζίνης* to an Indian fish which went out upon dry land. *Μύζον*, which may possibly have some connection with these variants, generally denoted a type of gray mullet, perhaps *Mugil auratus* Risso or *Mugil saliens* Risso.¹⁷⁸ Dorion apparently regarded *μάξιενος* as a term for a type of cod or hake, and it is perhaps of some significance that the bib or pout, *Gadus luscus* Linnaeus, is called mazzia today at Catanzaro.¹⁷⁹ One major objection to this identification is that the bib, as has already been mentioned, is only a wanderer in the Mediterranean and is almost never caught as far east as Greece. Thompson¹⁸⁰ says that since a fish with similar habits is compared to the goby by Theophrastus in the same passage, and since one of the Sicilian vernacular names for the goby

is mazzono, *μαζίνης* may be, *inter alia*, a goby name, although these fish names, in so far as they relate to *ἡπατος*, *γαλλερίας*, and *ὄνισκος*, point to some member of the cod family.

17. Γάδος

Dorion¹⁸¹ makes *γάδος* synonymous with *ὄνος*, while Hesychius says that the *γάδος* was called *γάλα* and sometimes *ὄξος*, emended by Gossen¹⁸² to *γαλαρίας* and *ὄνος*. In the Lexicon of Cyrillus *γάλα* is also given as a synonym of *γάδος*.

The origin of this name is obscure.¹⁸³ The term *γάδαρος*, "ass," which appears in Diogenianus,¹⁸⁴ looks like a derivative, as does *γαῖδάριον*, "ass," which occurs in an Amherst Papyrus of the VI/VII century. These forms have the appearance of an intermediate stage in the development of Modern Greek *γαῖδαρόψαρον*, "donkeyfish," the usual name of the poutassou, *Pollachius poutassou* Bonaparte (*Merlangus poutassou* Risso),¹⁸⁵ also known as *γαδοίψαρον*.¹⁸⁶ This species, while common in most of the Mediterranean, becomes rare in the Italian seas; it has flesh of good taste, but soft, and decomposes rapidly.¹⁸⁷ The common hake, *Merluccius vulgaris* Cuvier, is called *γαδεΐψαρον* on Crete,¹⁸⁸ and according to Mair¹⁸⁹ is known as *γάδος* in Greece, although a loan word from Turkish *μπακάλης*, "grocer," seems to be in more common use, in the form *μπακαλάρο* or *μπακαλιάρος*, also written *βακαλάος* and *βακάλης*.¹⁹⁰ Gossen,¹⁹¹ identifying the *γάδος* with the *γαλαρίας* and the *ὄνος*, refers it to the bib, *Gadus luscus* Linnaeus, an implausible identification, as has already been pointed out.

18. Χρέμης

Hesychius gives *χρέμης* as a synonym of *ὄνισκος*. Whether *χρέμης* and the variants

¹⁸¹ Apud Athen. 7.315.f.

¹⁸² "Hesych." (see note 39), no. 338.

¹⁷⁰ Cf. Hicesius apud Athen. 7.306.e; Plin. *N.H.* 32.77.

¹⁷¹ Cf. Kùlb in Steier, *op. cit.* (see note 153): 82.

¹⁷² Cf. Gossen, "Hesych." (see note 39), no. 213; "Athen." (see note 32): 261.

¹⁷³ Apud Athen. 7.315.f.

¹⁷⁴ Sic A; *μξίενος* C.

¹⁷⁵ Apud Athen. 7.322.b (in Kaibel, *Comicorum graecorum fragmenta*: 103).

¹⁷⁶ *Alim. aquat.* 10 (exc. Oribas. *Coll. med.* 2.58.27). *Μαζέας* is feminine in E and Gesner, masculine in E 2^m, *ημαζέας* in ABC, *ἡμαζέας* in MNV.

¹⁷⁷ Frg. 171 Wimmer (apud Athen. 8.332.b).

¹⁷⁸ Cf. Aristot. *Hist. an.* 543 b 14; 570 b 2; Hices. apud Athen. 7.306.e; Diphil. *ib.* 8.356.d.

¹⁷⁹ Cf. *La pesca nei mari* (see note 4) 3: 50.

¹⁸⁰ *Op. cit.*: 152-153.

¹⁸¹ 5.36.

¹⁸⁵ Cf. Hoffman-Jordan, *op. cit.* (see note 28): 276; N. C. Apostolidès, *La pêche en Grèce*, ed. 2: 29. Athens, 1907.

¹⁸⁶ Cf. D. Bikélas, "Sur la nomenclature moderne de la faune grecque," *Ann. Assoc. Encourag. Études Grecques* 12: 227. 1878.

¹⁸⁷ Cf. Day, *op. cit.* (see note 16) 1: 292.

¹⁸⁸ Cf. Badham, *op. cit.* (see note 98): 352.

¹⁸⁹ Introd. of his ed. of Oppian: lxxv.

¹⁹⁰ Cf. Apostolidès, *loc. cit.* (see note 185); Hoffman-Jordan, *op. cit.* (see note 28): 277.

¹⁹¹ "Hesych." (see note 39), no. 338.

χρέμης, *χρέμης*, and *χρέμψ* should be regarded as distinct from *χρόμης*, *χρόμης*, and *χρόμης* is debatable. Brands¹⁹² maintains that *χρόμης*, together with *χρέμης* and *χρέμης*, is related to *χρεμετίζειν*, "neigh," and *χρόμος*, defined by Hesychius as "a kind of noise," to which can be added *χρόμαδος*, "a grating, creaking sound." He explains *χρόμης* as meaning "gnasher," applied to the fish because it uttered a sound. Strömberg¹⁹³ accepts Brands' etymology of *χρόμης* and *χρόμης*, suggesting that the variant *χρέμης* may have arisen by contamination of *χέλυσ*, "turtle." But he thinks that *χρέμψ* may be a retrograde formation from *χρέμπτεσθαί*, "to clear one's throat."

Aristotle speaks of the sharp hearing of the *χρόμης*¹⁹⁴ and of the grunting sound it makes,¹⁹⁵ classifies it as a shoal fish that spawns once a year,¹⁹⁶ and mentions the otolith it has in its head.¹⁹⁷ Pliny¹⁹⁸ speaks of the flashing gleam of the chromis in the water, and Ovid¹⁹⁹ calls it unclean (*immunda*). Aelian²⁰⁰ says that the *χρέμης* has a larger barbel than the *γαλῆ*, which has a larger barbel than the *ἥπατος*. Oppian²⁰¹ says that the *χρέμης* lives in the sea not far from rivers or lakes, where the water is somewhat less salty and considerable silt is in suspension. Aristotle²⁰² mentions the *χρέμψ* in the same passage as the *χρόμης* as a fish with sharp hearing. Mair²⁰³ suspects that *χρεμψ* here is a mere variant reading for *χρόμης* and should be omitted, but it may well denote a different fish.

The *χρόμης* of Aristotle has been identified by Cuvier,²⁰⁴ J. Müller,²⁰⁵ Aubert-Wimmer,²⁰⁶ Küllb.,²⁰⁷ Schmid,²⁰⁸ Brands,²⁰⁹ and others as the maigre,

¹⁹² *Op. cit.* (see note 57): 184.

¹⁹³ *Op. cit.* (see note 59): 66-67.

¹⁹⁴ *Hist. an.* 534 a 8; cf. Plin. *N.H.* 10.193.

¹⁹⁵ *Ibid.* 535 b 16.

¹⁹⁶ *Ibid.* 543 a 2.

¹⁹⁷ *Ibid.* 601 b 29; cf. Plin. *N.H.* 9.57; Aelian. *Nat. an.* 9.7; Aristot. apud Athen. 7.305.d (p. 296 Rose).

¹⁹⁸ *N.H.* 32.153. Pliny also attributes nest-building to the chromis; but this is an error arising from hasty reading of Ovid. *Hal.* 121-122. On this point, cf. esp. E. de Saint-Denis, "Quelques bévues de Pline l'Ancien dans ses livres des poissons," *Rev. Philol.* 18: 156-157. 1944.

¹⁹⁹ *Hal.* 121. ²⁰⁰ *Nat. an.* 15.11. ²⁰¹ *Hal.* 1.112.

²⁰² *Hist. an.* 534 a 8.

²⁰³ Note on Oppian. *loc. cit.*

²⁰⁴ *Op. cit.* (see note 61) 5: 41.

²⁰⁵ *Arch. Anat.* 1857: 259.

²⁰⁶ *Aristoteles Tierkunde* 1: 144.

²⁰⁷ *Aristoteles*, p. 603.

²⁰⁸ "Die Fische in Ovids *Haliuticon*," *Philologus*, Supplementband 11: 305. 1907-10.

²⁰⁹ *Loc. cit.*

Sciaena aquila Risso, generally called *μυλοκόπι* in Modern Greek,²¹⁰ but *κρανιός* at Chalcis and *elro* at Marseille.²¹¹ Mair²¹² is inclined to concur in this identification. Gossen identifies the *χρόμης* of Hesychius as the gurnard, *Trigla gurnardus* Linnaeus,²¹³ and with regard to Hesychius' equation of *όνίσκος* with *χρέμης*, he says²¹⁴ that if the word is equivalent to *χρόμης*, it also denotes the gurnard, as in Oppian.²¹⁵ He similarly identifies²¹⁶ the *χρόμης* of Aelian, on the ground that it could hear well²¹⁷ and grunted.²¹⁸ He refers²¹⁹ the *κρέμης* that had an otolith in its head²²⁰ to the related species *Trigla rini* Bloch. But he identifies the *χρέμης* of Aelian²²¹ as the bearded ophidium, *Ophidium barbatum* Linnaeus, which is common throughout the Mediterranean and in the Adriatic, but has coarse flesh that is inferior as a food.²²² Thompson,²²³ who regards these names as variants, says that they denote *Sciaena aquila* and sometimes *Umbrina cirrhosa*. Aelian's account of the *χρέμης* in particular, he says, suggests the latter species, which has so conspicuous a barbel, or knob, below its chin that fishermen at Bayonne and Arcachon call it *verrue*, or *bourrugue* or *bourruget*, a word meaning "wart."

Unless Hesychius' equation of *όνίσκος* with *χρέμης* is an outright error, *χρέμης* and its variants *χρέμης*, *χρέμης*, and *χρέμψ* must have been used, although infrequently, as terms for a type of cod or hake, possibly *Phycis* sp. and *Motella* sp., and should therefore be regarded as distinct in usage from *χρόμης* and its variants, even though these words may all be cognates. This hypothesis is rendered more plausible by the fact that Aelian associates the *χρέμης* closely with the *γαλῆ* and the *ἥπατος* and uses *χρόμης* as a term for a distinctly different kind of fish.

19. Φυκίς

Another fish name that merits discussion in connection with the gadoids is *φυκίς*. Aris-

²¹⁰ Cf. Apostolidès, *op. cit.* (see note 185): 13.

²¹¹ Cf. Cuvier, *Ann. Inst. Archéol.* 1842: 73.

²¹² Cf. note on Oppian. *Hal.* 1.112.

²¹³ "Hesych." (see note 39), no. 2343.

²¹⁴ *Ibid.*, no. 2341.

²¹⁵ *Hal.* 1.112.

²¹⁶ "Aelian" (see note 32), par. 128.

²¹⁷ *Nat. an.* 9.7.

²¹⁸ *Id.* 10.11.

²¹⁹ "Athen." (see note 32), p. 256.

²²⁰ Aristot. apud Athen. 7.305.d.

²²¹ *Nat. an.* 12.11.

²²² Cf. Day, *op. cit.* (see note 16) 1: 326.

²²³ *Op. cit.*: 291-292.

total²²⁴ states that oviparous fish as a rule spawn but once a year, but that the small *φυκίδες* are an exception, spawning twice a year. The male, moreover, differs from the female in being blacker and having larger scales. Elsewhere²²⁵ he classifies the *φυκίς* among the fish that feed habitually on mud or seaweed or sea moss or the so-called stalk weed or growing plants and remarks that the only meat it will touch is that of prawns. In the light of his comment on the fish's diet, it is noteworthy that *φυκίς* is apparently a derivative of *φύκος*, "seaweed," probably applied to the fish either because it fed on seaweed or because it was commonly found among seaweed.²²⁶ Aristotle²²⁷ in another passage says that the *φυκίς*, like the *κόττυφος* and the *κίχλη* (probably *Crenilabrus pavo* Cuvier and Valenciennes and *Coricus rostratus* Cuvier and Valenciennes), changes its color. Usually it is white, but in spring it is mottled; and it is the only fish that builds a nest for itself, the female laying her spawn in this bed or nest. In still another passage²²⁸ he describes the *φυκίς* as being stickle-backed and having a speckled skin. Plutarch²²⁹ and Ovid²³⁰ also refer to this habit of building a nest. Pliny²³¹ translates the above passage of Aristotle almost verbatim and in another passage²³² classifies the *phycis* as a rockfish. Other authors also classify it as a rockfish,²³³ and it is so defined in various lemmas.²³⁴

The reference to nest-building led Cuvier²³⁵ to identify the *φυκίς* as the black goby, *Gobius niger* Linnaeus, an identification originally approved by Thompson,²³⁶ who referred to Aristotle for support. According to Aubert-Wim-

mer,²³⁷ Aristotle's allusion to stickles pointed to the stickleback, *Gasterosteus aculeatus* Linnaeus, and the 10-spined stickleback, *Gasterosteus pungitius* Linnaeus, which build nests, or to *Gobius niger*, the former being the more attractive identification. But Mair²³⁸ says that it is now known that some at least of the wrasses build nests and that all the other evidence points to one of the wrasses. He calls attention to the fact that the scholiast on Oppian²³⁹ equates *φυκίδες* with *λαπίναι* and concludes from the fact that *Crenilabrus pavo* is called *λήπαινα* in Modern Greek,²⁴⁰ *λαπίνα μαύρη* and *λαπίνα μεγάλη* at Chalcis,²⁴¹ that it is likely that this is the *φυκίς* of the ancients. Thompson²⁴² subsequently identified the *φύκης* or *φυκίς* as a wrasse, perhaps especially *Labrus mixtus* Linnaeus, but confused at times with the gobies, which are also nest-builders.

Numerous variants of *lapina* and *lapaina* are found in Italy and Sicily, mostly denoting *Crenilabrus pavo* and allied species. These apparently go back to a Latin form *labeo* "big-lipped."²⁴³ Italian *fico*, which probably goes back to the root of *φυκίς*, is discussed at considerable length by Barbier,²⁴⁴ who says that in the Italian-English dictionary of Florio (1688) *phici*, *phiscide*, *fici*, *fico* are defined as follows: "a fish that is sometimes white and sometimes thick with black spots, and frames itself a nest in the grass or reeds by the sea-side, and there deposits its spawn and sits on the young, known in Rome as *fico*." Barbier assumes from the definition that this is the *phycis* of Rondelet,²⁴⁵ who described the fish in very similar terms and says that it was called *mole* by the French, *phycio* by the Italians, *molere* by the Spaniards, and sometimes *pittara* at Naples. This fish is *Phycis mediterraneus* De la Roche, and Barbier found this identification of the *φυκίς* of the ancients more acceptable than the one made by

²²⁴ *Hist. an.* 567 b 18.

²²⁵ *Ib.* 591 b 10.

²²⁶ Cf. Brands, *op. cit.* (see note 57): 182. Strömberg (*op. cit.* [see note 59]: 83) suggests the following factors: (1) The fish fed on seaweed; (2) it changed color with the seasons like certain types of seaweed; and (3) it built a nest in the midst of algae and seaweed.

²²⁷ *Hist. an.* 607 b 18; cf. Aelian. *Nat. an.* 12.28; Plin. *N.H.* 9.81.

²²⁸ *Apud Athen.* 7.319.c.

²²⁹ *Mor.* 981.f (*De sollertia animalium* 33).

²³⁰ *Hal.* 122.

²³¹ *N.H.* 9.81.

²³² *Id.* 32.150.

²³³ Cf. Ps.-Hippocr. *De diaet.* 2.48; Galen. *Alim. fac.* 3.27.29 (pp. 367.1 and 368.3 Helmreich); *Vict. att.* 8.59 (p. 442.16 Helmreich); Oribas. *Coll. med.* 3.2.10; Dioscorus *apud Athen.* 7.305.b; Numen. *ib.* 7.319.b; Oppian. *Hal.* 1.126.

²³⁴ Cf. Papendick, *op. cit.* (see note 31): 4, 7.

²³⁵ *Op. cit.* (see note 61) 4: 151; 12: 7.

²³⁶ Note on Aristot. *Hist. an.* 567 b 20.

²³⁷ *Op. cit.* (see note 206) 1: 142.

²³⁸ *Introd.* to his ed. of Oppian: li-liiii.

²³⁹ *Hal.* 1.126.

²⁴⁰ Cf. Th. von Heldreich, *La faune de la Grèce* (Athens, 1878).

²⁴¹ Cf. Apostolidès, *op. cit.* (see note 185): 26.

²⁴² *Glossary*, p. 276.

²⁴³ Cf. Cl. Merlo, "Note etimologiche e lessicali," *Atti Accad. Sci. Torino* 42: 19. 1906-1907. H. Schuchardt, *Zeitschr. roman. Philol.* 31: 641-646. 1907.

²⁴⁴ *Op. cit.* (see note 104): 34-37; cf. also Meyer-Lübke, *op. cit.* (see note 19): 534.

²⁴⁵ *Libri de piscibus marinis* 6 (x): 186-188. Lugduni, 1554.

Cuvier. More recently Gossen²⁴⁶ has advanced the same identification.

Barbier comments on the possibility that names from the root of *φυκίς* were applied to various fishes, in view of the variants *φυκίς*, *φύκη*, and *φύκης*. Rondelet²⁴⁷ believed that the *φυκίς* and the *φύκη* were different fishes. Brands,²⁴⁸ recognizing only two variants, *φυκίς* and *φύκης*, the former feminine and the latter masculine, says that while the former may have denoted the female and the latter the male of the same species, it is more probable that the two denoted different fishes. Barbier cites from Carus²⁴⁹ as examples of fish names from the root of *φυκίς* the following: (1) fico at Rome, fica at Naples, and figo at Venice for *Phycis mediterraneus* De la Roche; (2) baca ficu and pesce ficu in Sicily, figura at Rome, fica at Naples, pesce fica at Palermo, and pisci ficu at Messina for *Gadus minutus* Linnaeus; (3) Italian fico for *Gadus luscus* Lacépède; and (4) Italian pesce fico "codfish" (Florio) and figaotto at Genoa for *Gadiculus blennioides* Günther. He goes on to say that the root of *φυκίς* has also been the source of names for other fishes than gadoids and their close relatives, but that these names always refer to fishes which frequent seaweed or feed on it. *Sciaena aquila* Risso, for example, bears such names as figoun and figou in the Provence (figon at Nice), fagao at Genoa (fegaro, according to Bonaparte; figau, according to Sassi), figao on Elba, fico at Tunis, and French fégaro at Damiette. Schuchardt²⁵⁰ gives figa and figo as names for *Stromateus fiatola* Linnaeus at Adria (also called figa at Venice and figo at Trieste, according to Carus) and figa at Spalato for *Labrus bimaculatus* Linnaeus (*Labrus mixtus* Linnaeus). He explains these names as an allusion to the color of the fish, and Barbier, assuming that he derives them from Latin *ficus*, *fica* "fig," characterizes the application as far-fetched, in view of the coloration of *Stromateus fiatola*, which in no respect resembles that of a fig. He believes that these names also go back to the root of *φυκίς*. Modern Greek *φυκόψαρο* is a generic term for any species of wrasse.²⁵¹

²⁴⁶ "Hesych." (see note 39), no. 507; "Aelian" (see note 32), par. 140; "Athen." (see note 32): 262.

²⁴⁷ *Loc. cit.*

²⁴⁸ *Op. cit.* (see note 57): 182.

²⁴⁹ *Op. cit.* (see note 5) 2: 573.

²⁵⁰ *Op. cit.* (see note 243): 645; cf. also 28 (1904): 443.

²⁵¹ Cf. Apostolidès, *op. cit.* (see note 185): 25; Hoffman-Jordan, *op. cit.* (see note 28): 269, 270.

One factor of importance which has been given almost no consideration is that *φυκίς* is in no ascertainable instance equated with a name identifiable as one of the gadoids, and it has already been noted that one of the primary difficulties met in identifying names applied to gadoids is a marked tendency to make these names mutually synonymous. As a result, it is generally easy to recognize that a given name belongs in the gadoid group, but often impossible to assign it with certainty to any particular species. It seems almost certain that the *φυκίς* was a type of nest-building wrasse, and Mair's identification is probably correct. At the same time, it is possible that a Latin name from the root of *φυκίς*, unrecorded in the extant literature, was applied not only to certain types of wrasse, but also to certain gadoids, in both cases because the fishes were closely associated with seaweed.

20. Λελεπρίς

For the reasons given above, the *λελεπρίς* defined by Hesychius as a name for the *φυκίς* and mentioned by Pliny²⁵² in connection with the *phycis*, identified by Gossen²⁵³ as perhaps *Phycis mediterraneus* De la Roche, should be referred to the wrasses.

21. Βρύττος

Hesychius defines *βρύττος* as a kind of pelagic echinoderm, also the name of a fish. The echinoderm, mentioned by Aristotle,²⁵⁴ is probably *Brissus unicolor* Klein. Gossen²⁵⁵ identifies the fish as perhaps *Physiculus dalwicki* Kaup, a small gadoid which resembles a sea-urchin. Thompson²⁵⁶ does not venture an identification.

22. ASELLUS

Latin asellus, "assfish," is approximately equivalent to and perhaps a translation of Greek *όνίσκος*. It is often equated with *όνίσκος* in lemmas,²⁵⁷ as it is in Cassius Felix.²⁵⁸ Pliny,²⁵⁹ moreover, uses asellus to translate Aristotle's *όνος*. Asellus, *όνος*, and *όνίσκος* all mean "assfish," asellus and *όνίσκος* being diminutive

²⁵² *N.H.* 32.149.

²⁵³ "Hesych." (see note 39), no. 1266.

²⁵⁴ *Hist. an.* 530 b 4.

²⁵⁵ "Hesych." (see note 39), no. 328.

²⁵⁶ *Glossary*: 36.

²⁵⁷ E.g., *Hermen. Anplon.* 89.2,37; *Hermen. Leid.* 16.54; *Hermen. Vat.* 436.34; *Hermen. Monac.* 187.2.

²⁵⁸ 28 (p. 44.17 Rose).

²⁵⁹ *N.H.* 9.61; 32.145.

formations; and asellus, like the Greek names, refers to the color of the fish.²⁶⁰ Pliny speaks of two kinds of asellus, the collyrus (or callarias) and the bacchus, of which the bacchus, a larger type, was preferred because it was caught only in the deep sea.

Barbier²⁶¹ identifies the asellus of Pliny as the common hake, *Merluccius vulgaris* Fleming, an identification which receives some support from the Romance nomenclature. Rondelet²⁶² reports that in his day this species was called asello and nasello in Liguria, and Faujas and Sassi report nasello as current at Genoa.²⁶³ Today this species is called asinel at Fiume, naselli at Genoa, and nasello at Ancona.²⁶⁴ In addition, Barbier cites Rolland as giving nasello as current on Elba and Malaspina as giving nasell as current at Parma. He also calls attention to French anon and anon de mer as names for the eglefin, *Gadus aeglefinus* Linnaeus. Italian nasello is reported as a name for *Merluccius cyprinus* by Meyer-Lübke,²⁶⁵ although there is no confirmation from other sources. Badham²⁶⁶ believed that the asellus was the sea-tench, *Phycis mediterraneus* De la Roche, better known as the Mediterranean hake. On the basis of the Romance nomenclature, the asellus is more plausibly referred to the common hake. Since Pliny indicates that the name was applied to at least two types, one of these would be the common hake and the other possibly the Mediterranean hake or the fork-beard hake, *Phycis blennioides* Bloch and Schneider.

23. ASINUS

The fish name asinus appears in Polemius Silvius²⁶⁷ in the form asinis. As asellus is equivalent to *ὄνισκος*, so asinus is equivalent to *ὄνος*. This name is almost certainly, like the others, an allusion to the ass-gray color of the fish.²⁶⁸ The evidence is insufficient to permit a specific identification, but it may be noted that

²⁶⁰ Cf. Varro *Ling.* 5.77 and note of R. G. Kent *ad loc.*

²⁶¹ *Op. cit.* (see note 104): 26.

²⁶² *Op. cit.* (see note 245) 9 (ix): 272-276.

²⁶³ Cf. Carus, *op. cit.* (see note 5) 2: 573.

²⁶⁴ Cf. *La pesca nei mari* (see note 4) 3: 95, 60, 31.

²⁶⁵ *Op. cit.* (see note 19): 56.

²⁶⁶ *Op. cit.* (see note 98): 350-353.

²⁶⁷ *Chron. min.* I, 544, 6. Cf. H. Schuchardt, "Zu den Fischnamen des Polemius Silvius," *Zeitschr. roman. Philol.* 30: 719. 1906. Thompson (*Glossary*, p. 183), unjustifiably, it appears, suspects an error in copying Plin. *N.H.* 9.61.

²⁶⁸ Cf. Barbier, "Noms 'de poissons,'" *Rev. Langues Romanes* 54: 151. 1911.

Rondelet²⁶⁹ reported asino as a current Italian name for the common hake, *Merluccius vulgaris*, and Thompson²⁷⁰ cites asinel at Fiume for this species.

The conclusions reached relative to the meanings of the ancient names may be summarized as follows:

GREEK NAMES

1. Βάκχος (sect. 15): Apparently a name for one of the gadoids, as well as a type of scienid and a type of gray mullet.

2. Βρύπτος (sect. 21): Possibly the small gadoid *Physiculus dalwicki* Kaup, although this is very uncertain.

3. Γάδος (sect. 17): One of the gadoids, similar to the *ὄνος* and the *ὄνισκος*.

4. Γαλή (sect. 2): When the habitat is the sea, it may denote *Phycis* sp. and *Motella* sp. When it refers to a freshwater fish, it probably denotes principally the burbot, *Lota vulgaris* Cuvier, but also probably sometimes the lamper-eel, *Petromyzon fluviatilis* Linnaeus.

5. Δελλαγός (sect. 5): Probably the burbot, *Lota vulgaris* Cuvier.

6. Ἡπάτος (sect. 3): One of the larger marine gadoids, possibly a type of ling.

7. Καλλαρίας (sect. 11): Probably one of the smaller marine gadoids.

8. Λαζίνης (sect. 12): Possibly one of the gadoids.

9. Λεβίας (sect. 4): When the habitat is the sea, it denotes one of the marine gadoids. As a lake fish, it is probably the burbot, *Lota vulgaris* Cuvier. As a Nile fish, it is probably *Labeo niloticus* Cuvier.

10. Λελεπίς (sect. 20): A type of wrasse.

11. Μάξιμος (sect. 16): One of the gadoids.

12. Ὀνίας (sect. 10): A descriptive term, not a fish name.

13. Ὀνίσκος (sect. 9): Probably denotes the common hake, *Merluccius vulgaris* Cuvier.

14. Ὀνος (sect. 8): Probably denotes the Mediterranean hake, *Phycis mediterraneus* De la Roche, and the fork-beard hake, *Phycis blennioides* Bloch and Schneider.

15. Ὀξος (sect. 13): Probably a ms. error for *ὄνος*.

16. Πρέπων (sect. 6): Probably one of the larger marine gadoids.

17. Πρόβατον (sect. 7): Probably one of the larger marine gadoids.

18. Φυκίς (sect. 19): A type of wrasse, probably *Crenilabrus pavo* Cuvier and Valenciennes.

19. Χρέμης (sect. 18): Possibly denotes *Phycis* sp. and *Motella* sp.

²⁶⁹ *Loc. cit.* (see note 261).

²⁷⁰ *Glossary*: 97.

LATIN NAMES

1. ASELLUS (sect. 22): Probably principally the common lake, *Merluccius vulgaris* Cuvier, possibly also the Mediterranean lake, *Phycis mediterraneus* De la Roche, or the fork-beard lake, *Phycis blennioides* Bloch and Schneider.

2. ASINUS (sect. 23): Possibly the common lake, *Merluccius vulgaris* Cuvier.

3. GALAXIAS (sect. 14): Possibly a synonym of mustela, used more particularly as a term for *Phycis* sp. and *Motella* sp.

4. MUSTELA (sect. 1): When the habitat is the sea, it probably denotes *Phycis* sp. and *Motella* sp. When it refers to a freshwater fish, it denotes principally the burbot, but probably also sometimes the lamper-eel, *Petromyzon fluviatilis* Linnaeus.

The major applications of ancient names to various species of gadoids were as follows:

1. *Phycis mediterraneus* De la Roche and *Phycis blennioides* Bloch and Schneider: Usually called mustela in Latin, perhaps also asellus and galaxias. Usually called ὄνος in Greek, perhaps also γαλή and χρέμης.

2. *Merluccius vulgaris* Cuvier: Usually called ὀνίσκος in Greek and asellus in Latin, perhaps also asinus.

3. *Motella tricirrata* Nilsson: Usually called mustela in Latin, perhaps also galaxias. Perhaps known as γαλή and χρέμης in Greek. *Motella mustela* Nilsson: Usually called mustela in Latin, perhaps also galaxias.

4. *Lota vulgaris* Cuvier: Known as mustela in Latin and as γαλή, λεβίας, and δελκανός in Greek.

5. *Molva elongata* Risso: Perhaps known in Greek as ἥπατος.

There is little evidence that codfishes were much esteemed as food fish by the Greeks. Archestratus²⁷¹ says that ὄνοι of respectable size were caught at Anhedon, but that he personally found the flesh rather spongy and unpalatable, although others praised it highly. Anaxandrides²⁷² mentions ὄνοι as a banquet item; Diphilus²⁷³ says that the λεβίας was popular among the Rhodians; and Archestratus²⁷⁴ speaks of buying both the λεβίας and the ἥπατος at Delos and Tenos.

²⁷¹ Apud Athen. 7.315.f (frg. 35 Ribbeck, frg. 14 Brandt).

²⁷² *Ib.* 4.131.e (in Kock, *Comicorum Atticorum fragmenta* 2: 151).

²⁷³ *Ib.* 4.132.d.

²⁷⁴ *Ib.* 7.301.d (frg. 30 Ribbeck, frg. 27 Brandt).

When we turn to the Romans, we find a different picture. Einnius²⁷⁵ considered the marine mustela superior to all other fishes when caught at Clipea, and Pliny²⁷⁶ ranked it second only to the parrotfish in his time, although it was esteemed chiefly for its liver. The mustela of the Lake of Constance, which must be the burbot, in his opinion compared favorably in excellence of taste with the marine mustela. As for the asellus, Pliny²⁷⁷ says that in former times the asellus and the sea-bass ranked second only to the sturgeon. It was still in high favor not long before his time, for in the reign of Nero there was a saying, *post asellum diaria non sumo* ("After an asellus I don't take ordinary fare").²⁷⁸ Ovid,²⁷⁹ moreover, considered the asellus quite unworthy of such an ugly name. According to Varro,²⁸⁰ the best specimens were caught off Pessinus in Galatia. In view of the obvious esteem in which the asellus was held, it is somewhat surprising to find that the only use made of it in the cookbook of Apicius is in grated form as an ingredient in an elaborate milk dish.²⁸¹ Possibly this is a reflection of Greek taste.

The ancient physicians were inclined to regard codfishes with favor from the dietetic point of view. Galen considered the ὄνος and the ὀνίσκος tender and relatively easy to digest,²⁸² although he deemed ὀνίσκοι taken off river mouths somewhat inferior and more difficult to digest.²⁸³ Xenocrates²⁸⁴ says that the flesh of the ὀνίσκος is difficult to assimilate, but easy to pass, and nourishing. In another passage,²⁸⁵ he approves the flesh of the ἥπατος and the μαζέας as being of good taste, although hard to digest, but nourishing and easily passed. Oribasius²⁸⁶ recommends the ἥπατος as providing a nourishment that is excellent for feeble persons and invalids. Euthydemus²⁸⁷ remarks that the δελκανός is very wholesome when pickled in brine.

²⁷⁵ *Heduph.* 1 (apud Apul. *Apol.* 39).

²⁷⁶ *N.H.* 9.63.

²⁷⁷ *Id.* 9.61.

²⁷⁸ Petron. 24.7.

²⁷⁹ *Hal.* 133.

²⁸⁰ *Men.* 403 (apud Gell. 6.16.5).

²⁸¹ 4.133.

²⁸² *Alim. fac.* 3.29,40 (pp. 368, 384 Helmreich).

²⁸³ *Alim. fac.* 3.29 (p. 368.21 Helmreich).

²⁸⁴ *Alim. aquat.* 14.

²⁸⁵ *Id.* 10 (exc. Oribas. *Coll. med.* 2.58.27).

²⁸⁶ *Coll. med.* 3.15.7.

²⁸⁷ Apud Athen. 3.118.b.